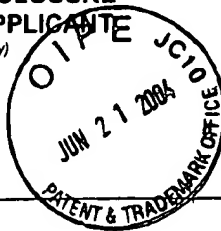


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Application Number	09/944981
Filing Date	August 30, 2001
First Named Inventor	Ahn, Kie
Group Art Unit	2812
Examiner Name	Lindsay, Walter

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Sheet 1 of 12

Attorney Docket No: 1303.021US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date if Appropriate
WL	US-2001/0002280	05/31/2001	Sneh, Ofer	427	255.28	12/22/2000
WL	US-2001/0009695 A1	07/26/2001	Saanila, Ville A., et al.	427	255.39	01/18/2001
WL	US-2001/0042505	11/22/2001	Vaartstra, Brian A.	117	104	07/18/2001
WL	US-2001/0051442 A1	12/13/2001	Katsir, Dina, et al.	438	758	06/28/2001
WL	US-2001/0053082 A1	12/20/2001	Chipalkatti, Makarand H., et al.	362	496	12/22/1999
WL	US-2002/0192974	12/19/2002	Ahn, Kie Y., et al.	438	722	06/13/2001
WL	US-2002/0001971	01/03/2002	Cho, Hag-ju	438	765	06/27/2001
WL	US-2002/0022156 A1	02/21/2002	Bright, Clark I.	428	698	08/24/2001
WL	US-2002/0119297	08/29/2002	Forrest, Stephen R., et al.	428	199	12/21/2001
WL	US-2002/0146916 A1	10/10/2002	Irino, Kiyoshi, et al.	438	785	03/29/2002
WL	US-2003/0001212	01/02/2003	Hu, Yongjun, et al.	257	388	08/29/2002
WL	US-2003/0001241 A1	01/02/2003	Chakrabarti, Utpal K., et al.	257	643	05/28/2002
WL	US-2003/0003722	01/02/2003	Vaartstra, Brian A.	438	656	08/19/2002
WL	US-2003/0042526	03/06/2003	Weimer, Ronald A.	257	309	08/29/2001
WL	US-2003/0052356	03/20/2003	Yang, Haining, et al.	257	309	10/11/2002
WL	US-2003/0052358	03/20/2003	Weimer, Ronald A.	257	310	10/25/2002
WL	US-2003/0102501	06/05/2003	Yang, Haining, et al.	257	295	12/12/2002

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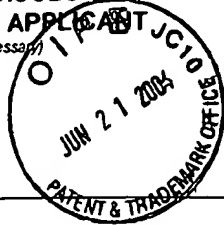
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Application Number 09/944981  
Filing Date August 30, 2001  
First Named Inventor Ahn, Kie  
Group Art Unit 2812  
Examiner Name Lindsay, Walter

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Attorney Docket No: 1303.021US1

WL	US-2003/0119313	06/26/2003	Yang, Haining , et al.	438	681	12/05/2002
CWL	US-2003/0157764	08/21/2003	Ahn, Kie Y., et al.	438	212	02/20/2002
WL	US-2003/0175411 A1	09/18/2003	Kodas, Toivo T., et al.	427	58	10/04/2002
WL	US-200/30222300	12/04/2003	Basceri, Cem , et al.	257	309	03/13/2003
WL	US-2003/0228747	12/11/2003	Ahn, Kie Y., et al.	438	591	06/05/2002
WL	US-3,381,114	04/30/1968	Nakanuma, Sho	219	385	12/18/1964
WL	US-4,394,673	07/19/1983	Thompson, Richard D., et al.	357	15	09/29/1980
WL	US-4,413,022	11/01/1983	Suntola, Tuomo S., et al.	427	255.2	06/21/1979
WL	US-4,590,042	05/20/1986	Drage, David J.	422	186.06	12/24/1984
WL	US-4,767,641	08/30/1988	Kieser, Jorg , et al.	427	38	07/03/1986
WL	US-4,993,358	02/19/1991	Mahawili, Imad	118	715	07/28/1989
WL	US-5,006,192	04/09/1991	Deguchi, Mikio	156	345	11/21/1988
WL	US-5,055,319	10/08/1991	Bunshah, Rointan F., et al.	427	38	04/02/1990
WL	US-5,080,928	01/14/1992	Klinedinst, Keith A., et al.	427	70	10/05/1990
WL	US-5,198,029	03/30/1993	Dutta, Arunava , et al.	118	303	02/19/1992
WL	US-5,595,606	01/21/1997	Fujikawa, Yuichiro , et al.	118	725	04/18/1996
WL	US-5,621,681	04/15/1997	Moon, Jong	365	145	03/22/1996
WL	US-5,698,022	12/16/1997	Glassman, Timothy E., et al.			08/14/1996
WL	US-5,735,960	04/07/1998	Sandhu, Gurtej S., et al.	118	723 IR	04/02/1996
WL	US-5,744,374	04/28/1998	Moon, Jong	437	60	11/18/1996
WL	US-5,789,030	08/04/1998	Rolfson, J B.	429	309	03/18/1996
WL	US-5,840,897	11/24/1998	Kirlin, Peter , et al.	546	2	06/07/1995
WL	US-5,916,365	06/29/1999	Sherman, Arthur	117	92	08/16/1996
WL	US-5,950,925	09/14/1999	Fukunaga, Yukio , et al.	239	132.3	10/10/1997
WL	US-5,972,847	10/26/1999	Feenstra, Roeland , et al.	505	473	01/28/1998
WL	US-6,010,969	01/04/2000	Vaarstra, Brian A.	438	758	10/02/1996
WL	US-6,025,627	02/15/2000	Forbes, Leonard , et al.	257	321	05/29/1998
WL	US-6,057,271	05/02/2000	Kenjiro, Higaki , et al.	505	475	06/07/1995

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Sheet 3 of 12		<b>Attorney Docket No:</b> 1303.021US1	

WL	US-6,059,885	05/09/2000	Ohashi, Tadashi , et al.	118	730	12/16/1997
WL	US-6,093,944	07/25/2003	VanDover, Robert B.	257	310	06/04/1998
WL	US-6,110,529	08/29/2000	Gardiner, R. A., et al.	427	250	06/07/1995
WL	US-6,120,531	09/19/2000	Zhou, Lin , et al.	607	111	10/17/1997
WL	US-6,161,500	12/19/2000	Kopacz, Stanislaw , et al.	118	723 E	09/30/1997
WL	US-6,187,484	02/13/2001	Glass, Thomas R., et al.	430	5	08/31/1999
WL	US-6,203,613	03/20/2001	Gates, Stephen M., et al.	117	104	10/19/1999
WL	US-6,206,972	03/27/2001	Dunham, Scott W.	118	715	07/08/1999
WL	US-6,207,589	03/27/2001	Ma, Yanjun , et al.	438	785	02/29/2000
WL	US-6,217,645	04/17/2001	Vaartstra, Brian A.	106	287.18	09/02/1999
WL	US-6,225,237	05/01/2001	Vaartstra, Brian A.	438	778	09/01/1998
WL	US-6,232,847	05/15/2001	Marcy, 5th, Henry O., et al.	331	167	05/28/1998
WL	US-6,273,951	08/14/2001	Vaartstra, Brian A.	117	104	06/16/1999
WL	US-6,281,144	08/28/2001	Cleary, Thomas J., et al.	438	780	07/15/1999
WL	US-6,291,866	09/18/2001	Wallace, Robert M., et al.	257	410	10/20/1999
WL	US-6,294,813	09/25/2001	Forbes, Leonard , et al.	257	321	02/15/2000
WL	US-6,297,516	10/02/2001	Forrest, Stephen R., et al.	257	40	06/25/1999
WL	US-6,302,964	10/16/2001	Umotoy, Salvador P., et al.	118	715	03/16/2000
WL	US-6,331,465	12/18/2001	Forbes, Leonard , et al.	438	260	02/15/2000
WL	US-6,348,386	02/19/2002	Gilmer, David C.	438	288	04/16/2001
WL	US-6,368,398	04/09/2002	Vaartstra, Brian A.	106	28718	01/19/2001
WL	US-6,368,518	04/09/2002	Vaartstra, Brian A.	216	67	08/25/1999
WL	US-6,380,579	04/30/2002	Nam, Sang-don , et al.	257	306	04/11/2000
WL	US-6,391,769	05/21/2002	Lee, Jong-myeong , et al.	438	643	03/14/2000
WL	US-6,420,279	07/16/2002	Ono, Yoshi , et al.	438	785	06/28/2001
WL	US-6,432,779	08/13/2002	Hobbs, Christopher , et al.	438	287	01/30/2001
WL	US-6,444,039	09/03/2002	Nguyen, Tue	118	715	03/07/2000
WL	US-6,444,895	09/03/2002	Nikawa, Kiyoshi	136	212	09/24/1999
WL	US-6,445,023	09/03/2002	Vaartstra, Brian , et al.	257	295	03/16/1999

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	Application Number	09/944981
	Filing Date	August 30, 2001
	First Named Inventor	Ahn, Kie
	Group Art Unit	2812
	Examiner Name	Lindsay, Walter
Sheet 4 of 12		Attorney Docket No: 1303.021US1

WL	US-6,448,192	09/10/2002	Kaushik, Vidya S.	438	785	04/16/2001
WL	US-6,451,695	09/17/2002	Sneh, Ofer	438	685	12/22/2000
WL	US-6,455,717	09/24/2002	Vaartstra, Brian A.	556	1	08/28/2000
WL	US-6,458,701	10/01/2002	Chae, Yun-sook , et al.	438	680	10/12/2000
WL	US-6,465,334	10/15/2002	Buynoski, Matthew S., et al.	438	591	10/05/2000
WL	US-6,482,740	11/19/2002	Soininen, Pekka J., et al.	438	686	05/15/2001
WL	US-6,498,063	12/24/2002	Ping, Er-Xuan	438	253	10/12/2001
WL	US-6,514,828	02/04/2003	Ahn, Kie Y., et al.	438	297	04/20/2001
WL	US-6,518,610	02/11/2003	Yang, Haining , et al.	257	295	02/20/2001
WL	US-6,521,911	02/18/2003	Parsons, Gregory N., et al.	257	52	07/19/2001
WL	US-6,524,867	02/25/2003	Yang, Haining , et al.	438	3	12/28/2000
WL	US-6,524,901	02/25/2003	Trivedi, Jigish D.	438	183	06/20/2002
WL	US-6,534,420	03/18/2003	Ahn, Kie Y., et al.	438	768	07/18/2001
WL	US-6,573,199	06/03/2003	Sandhu, Gurtej S., et al.	438	798	08/30/2001
WL	US-6,586,792	07/01/2003	Ahn, Kie Y., et al.	257	295	03/15/2001
WL	US-6,593,610	07/15/2003	Gonzalez, Fernando	257	296	12/13/2001
WL	US-6,602,338	08/05/2003	Chen, San-Yuan , et al.	106	287.19	04/11/2001
WL	US-6,608,378	08/19/2003	Ahn, Kie Y., et al.	257	701	08/26/2002
WL	US-6,613,702	09/02/2003	Sandhu, Gurtej S., et al.	438	798	01/17/2003
WL	US-6,639,267	10/28/2003	Eldridge, Jerome M.	257	310	07/29/2002
WL	US-6,661,058	12/09/2003	Ahn, Kie Y., et al.	257	344	02/11/2002
WL	US-6,682,602	01/27/2004	Vaartstra, Brian A.	118	715	08/19/2002
WL	US-6,683,005	01/27/2004	Sandhu, Gurtej S., et al.	438	715	01/17/2003

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>
WL	JP-5090169	04/09/1993	Watanabe, Kunihiro , et al.			
WL	JP-62-199019	09/02/1987	Takaaki, Sasaki			

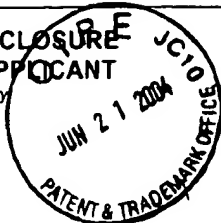
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**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
WL		AARIK, JAAN, et al., "Atomic layer growth of epitaxial TiO/sub 2/ thin films from TiCl/sub 4/ and H/sub 2/O on alpha -Al/sub 2/O/sub 3/ substrates", <u>Journal of Crystal Growth</u> , 242(1-2), (2002), 189-198	
WL		AARIK, JAAN, et al., "Influence of substrate temperature on atomic layer growth and properties of HfO/sub 2/ thin films", <u>Thin Solid Films</u> , 340(1-2), (1999), 110-116	
WL		AARIK, JAAN, et al., "Phase transformations in hafnium dioxide thin films grown by atomic layer deposition at high temperatures", <u>Applied Surface Science</u> , 173(1-2), (March 2001), 15-21	
WL		AARIK, JAAN, et al., "Texture Development in nanocrystalline hafnium dioxide thin films grown by atomic layer deposition", <u>Journal of Crystal Growth</u> , 220, (2000), 105-113	
WL		AHN, K. Y., et al., "Electron Beam Deposition of Amorphous Lanthanide-doped TiOx Dielectric Films", 3 pages	
WL		ALEN, PETRA, "Atomic Layer deposition of Ta(Al)N(C) thin films using trimethylaluminum as a reducing agent", <u>Journal of the Electrochemical Society</u> , 148(10), (October 2001), G566-G571	
WL		BENDORAITIS, J. G., et al., "Optical energy gaps in the monoclinic oxides of hafnium and zirconium and their solid solutions", <u>Journal of Physical Chemistry</u> , 69(10), (1965), 3666-3667	
WL		BRAUD, F., "Ultra Thin Diffusion Barriers for Cu Interconnections at The Gigabit Generation and Beyond", <u>VMIC Conference Proceedings</u> , (1996), 174-179	
WL		BUNSHAH, ROINTAN F., et al., "Deposition Technologies for Films and Coatings: Developments and Applications", <u>Park Ridge, N.J., U.S.A. : Noyes Publications</u> , (1982), 102-103	
WL		CAVA, R. J., et al., "Improvement of the dielectric properties of Ta/sub 2/O/sub 5/ through substitution with Al/sub 2/O/sub 3/", <u>Applied Physics Letters</u> , 70(11), (March 1997), 1396-8	
WL		CHAMBERS, J. J., et al., "Physical and electrical characterization of ultrathin yttrium silicate insulators on silicon", <u>Journal of Applied Physics</u> , 90(2), (July 15, 2001), 918-33	
WL		COPEL, M., et al., "Structure and stability of ultrathin zirconium oxide layers on Si(001)", <u>Applied Physics Letters</u> , 76(4), (January 2000), 436-438	
WL		DE FLAVIIS, FRANCO, et al., "Planar microwave integrated phase-shifter design with high purity ferroelectric material", <u>IEEE Transactions on Microwave Theory &amp; Techniques</u> , 45(6), (June 1997), 963-969	
WL		DESU, S. B., "Minimization of Fatigue in Ferroelectric Films", <u>Physica Status Solidi A</u> , 151(2), (1995), 467-480	

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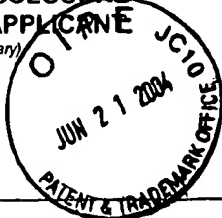
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Examiner Name	Lindsay, Walter

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Sheet 6 of 12

Attorney Docket No: 1303.021US1

WL	DING, "Copper Barrier, Seed Layer and Planarization Technologies", <u>VMIC Conference Proceedings</u> , (1997),87-92	
WL	DUSCO, C, et al., "Deposition of tin oxide into porous silicon by atomic layer epitaxy", <u>Journal of the Electrochemical Society</u> , 143, (1996),683-687	
WL	EL-KAREH, B, et al., "The evolution of DRAM cell technology", <u>Solid State Technology</u> , 40(5), (1997),89-90, 92, 95-6, 98, 100-1	
WL	ENGELHARDT, M., "Modern Applications of Plasma Etching and Patterning in Silicon Process Technology", <u>Contributions to Plasma Physics</u> , 39(5), (1999),473-478	
WL	FUKUMOTO, HIROFUMI, et al., "Heteroepitaxial growth of Y2O3 films on silicon", <u>Applied Physics Letters</u> , 55(4), (July 24, 1989),360-361	
WL	FUYUKI, TAKASHI, et al., "Electronic Properties of the Interface between Si and TiO2 Deposited at Very Low Temperatures", <u>Japanese Journal of Applied Physics</u> , Vol. 25, No. 9, (1986),1288-1291	
WL	GARTNER, M, et al., "Spectroellipsometric characterization of lanthanide-doped TiO2 films obtained via the sol-gel technique", <u>Thin Solid Films</u> , 234(1-2), (1993),561-565	
WL	GELLER, S., et al., "Crystallographic Studies of Perovskite-like Compounds. II. Rare Earth Aluminates", <u>Acta Cryst.</u> Vol. 9, (May 1956),1019-1025	
WL	GIESS, E. A., et al., "Lanthanide gallate perovskite-type substrates for epitaxial, high-T/sub c/ superconducting Ba/sub 2/YCu/sub 3/O/sub 7- delta / films", <u>IBM Journal of Research and Development</u> , 34(6), (November 1990),916-926	
WL	GUILLAUMOT, B, et al., "75 nm damascene metal gate and high-k integration for advanced CMOS devices", <u>Technical Digest of International Electron Devices Meeting 2002</u> , (2002),355-358	
WL	GUO, et al., "High Quality Ultra-thin (1.5nm) TiO2/Si3N4 Gate Dielectric for Deep Sub-micron CMOS Technology", <u>Cited in related application</u> , (1999),	
WL	GUSEV, E P., et al., "Ultrathin High-K Dielectrics Grown by Atomic Layer Deposition: A Comparative Study of ZrO2, HfO2, Y2O3 and Al2O3", <u>Electrochemical Society Proceedings Volume 2001-9</u> , (2001),189-195	
WL	GUTOWSKI, M J., "Thermodynamic stability of high-K dielectric metal oxides ZrO/sub 2/ and HfO/sub 2/ in contact with Si and SiO/sub 2/", <u>Applied Physics Letters</u> , 80(11), (March 18, 2002),1897-1899	
WL	HUNT, C. E., et al., "Direct bonding of micromachined silicon wafers for laser diode heat exchanger applications", <u>Journal of Micromechanics and Microengineering</u> , 1(3), (September 1991),152-156	
WL	IDDLES, D M., et al., "Relationships between dopants, microstructure and the microwave dielectric properties of ZrO2-TiO2-SnO2 ceramics", <u>Journal of Materials Science</u> , 27(23), (December 1992),6303-6310	
WL	IJIMA, T., "Microstructure and Electrical Properties of Amorphous W-Si-N Barrier Layer for Cu Interconnections", <u>1996 VMIC Conference</u> , (1996),168-173	
WL	JEON, SANGHUN, et al., "Excellent electrical characteristics of lanthanide (Pr, Nd, Sm, Gd, and Dy) oxide and lanthanide-doped oxide for MOS gate dielectric	

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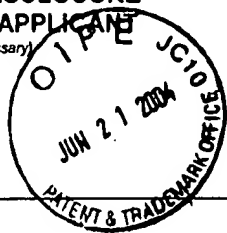
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US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Application Number 09/944981  
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 First Named Inventor Ahn, Kie  
 Group Art Unit 2812  
 Examiner Name Lindsay, Walter

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WL	applications", Electron Devices Meeting, 2001. IEDM Technical Digest, International, (2001),471-474	
WL	JEONG, CHANG-WOOK, et al., "Plasma-Assisted Atomic layer Growth of High-Quality Aluminum Oxide Thin Films", <u>Japanese Journal of Applied Physics</u> , 40, (January 2001),285-289	
WL	JUNG, H S., et al., "Improved current performance of CMOSFETs with nitrogen incorporated HfO/sub 2/-Al/sub 2/O/sub 3/ laminate gate dielectric", <u>Technical Digest of International Electron Devices Meeting 2002</u> , (2002),853-856	
WL	KANG, L, et al., "MOSFET devices with polysilicon on single-layer HfO/sub 2/ high-K dielectrics", <u>International Electron Devices Meeting 2000. Technical Digest. IEDM</u> , (2000),35-8	
WL	KEOMANY, D., et al., "Sol gel preparation of mixed cerium-titanium oxide thin films", <u>Solar Energy Materials and Solar Cells</u> , 33(4), (August 1994),429-441	
WL	KIM, Y W., et al., "50nm gate length logic technology with 9-layer Cu interconnects for 90nm node SoC applications", <u>Technical Digest of International Electron Devices Meeting 2002</u> , (2002),69-72	
WL	KIM, C. T., et al., "Application of Al <sub>2</sub> O <sub>3</sub> Grown by Atomic Layer Deposition to DRAM and FeRAM", <u>12th International Symposium in Integrated Ferroelectrics</u> , (March, 2000),1 page	
WL	KIM, D., et al., "Atomic Control of Substrate Termination and Heteroepitaxial Growth of SrTiO <sub>3</sub> /LaAlO <sub>3</sub> Films", <u>Journal of the Korean Physical Society</u> , 36(6), (June 2000),444-448	
WL	KIM, BYOUNG-YOUP, et al., "Comparison study for TiN films deposited from different method: chemical vapor deposition and atomic layer deposition", <u>Mechanisms of Surface and Microstructure Evolution in Deposited Films and Film Structures Symposium (Materials Research Society Symposium Proceedings Vol.672)</u> , (2001),7.8.1-7.8.6	
WL	KIM, TAESOK, et al., "Correlation between strain and dielectric properties in ZrTiO/sub 4/ thin films", <u>Applied Physics Letters</u> , 76(21), (May 2000),3043-3045	
WL	KIM, TAESOK, et al., "Dielectric properties and strain analysis in paraelectric ZrTiO/sub 4/ thin films deposited by DC magnetron sputtering", <u>Japanese Journal of Applied Physics Part 1-Regular Papers Short Notes &amp; Review Papers</u> , vol.39, no.7A, (2000),4153-4157	
WL	KIM, YONGJO, et al., "Effect of microstructures on the microwave dielectric properties of ZrTiO/sub 4/ thin films", <u>Applied Physics Letters</u> , 78(16), (April 2001),2363-2365	
WL	KIM, Y, et al., "Substrate dependence on the optical properties of Al/sub 2/O/sub 3/ films grown by atomic layer deposition", <u>Applied Physics Letters</u> , 71(25, 22), (December 1997),3604-3606	

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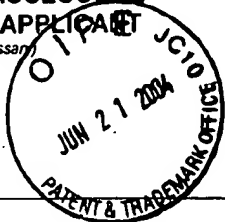
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Attorney Docket No: 1303.021US1

WL	KRAUTER, G. , et al., "Room Temperature Silicon Wafer Bonding with Ultra-Thin Polymer Films", <u>Advanced Materials</u> , 9(5), (1997),417-420	
WL	KUKLI, KAUPO , "Atomic Layer Deposition of Titanium Oxide from TiI4 and H2O2", <u>Chemical Vapor Deposition</u> , 6(6), (2000),303-310	
WL	KUKLI, K. , et al., "Comparison of hafnium oxide films grown by atomic layer deposition from iodide and chloride precursors", <u>Thin Solid Films</u> , 416, (2002),72-79	
WL	KUKLI, K. , et al., "Controlled growth of yttrium oxysulphide thin films by atomic layer deposition", <u>Materials Science Forum</u> , 315-317, (1999),216-221	
WL	KUKLI, KAUPO , et al., "Dielectric Properties of Zirconium Oxide Grown by Atomic Layer Deposition from Iodide Precursor", <u>Journal of The Electrochemical Society</u> , 148(12),(2001),F227-F232	
WL	KUKLI, KAUPO , et al., "Influence of thickness and growth temperature on the properties of zirconium oxide films growth by atomic layer deposition on silicon", <u>Thin Solid Films</u> , 410(1-2), (2002),53-60	
WL	KUKLI, KAUPO , et al., "Low-Temperature Deposition of Zirconium Oxide-Based Nanocrystalline Films by Alternate Supply of Zr[OC(CH3)3]4 and H2O", <u>Chemical Vapor Deposition</u> , 6(6), (2000),297-302	
WL	KUKLI, K J., et al., "Properties of hafnium oxide films grown by atomic layer deposition from hafnium tetraiodide and oxygen", <u>Journal of Applied Physics</u> , 92(10), (November 15, 2002),5698-5703	
WL	KWO, J. , et al., "High gate dielectrics Gd2O3 and Y2O3 for silicon", <u>Applied Physics Letters</u> , 77(1), (July 3, 2000),130-132	
WL	KWO, J. , "Properties of high k gate dielectrics Gd2O3 and Y2O3 for Si", <u>Journal of Applied Physics</u> , 89(7), (2001),3920-3927	
WL	LAURSEN, T. , "Encapsulation of Copper by Nitridation of Cu-Ti Alloy/Bilayer Structures", <u>International Conference on Metallurgical Coatings and Thin Films</u> , Abstract No. H1.03, San Diego, CA,(April 1997),309	
WL	LEE, BYOUNG H., et al., "Characteristics of TaN gate MOSFET with ultrathin hafnium oxide (8 A-12 A)", <u>Electron Devices Meeting, 2000. IEDM Technical Digest. International</u> , (2000),39-42	
WL	LEE, A E., et al., "Epitaxially grown sputtered LaAlO3 films", <u>Applied Physics Letters</u> , 57(19), (November 1990),2019-2021	
WL	LEE, S J., et al., "High quality ultra thin CVD HfO2 gate stack with poly-Si gate electrode", <u>Electron Devices Meeting, 2000. IEDM Technical Digest. International</u> , (2000),31-34	
WL	LEE, CHENG-CHUNG , et al., "Ion-assistend deposition of silver films", <u>Thin Solid Films</u> , vol. 359, (2000),95-97	
WL	LEE, JUNG-HYOUNG , et al., "Mass production worthy HfO/sub 2/-Al/sub 2/O/sub 3/ laminate capacitor technology using Hf liquid precursor for sub-100 nm DRAMs", <u>Electron Devices Meeting, 2002. IEDM '02. Digest. International</u> , (2002),221-224	

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WL	LEE, DONG H., et al., "Metalorganic chemical vapor deposition of TiO <sub>2</sub> :N anatase thin film on Si substrate", <u>Appl. Phys. Lett.</u> , 66(7), (February 1995),815-816	
WL	LEE, L P., et al., "Monolithic 77 K dc SQUID magnetometer", <u>Applied Physics Letters</u> , 59(23), (December 1991),3051-3053	
WL	LEE, C. H., et al., "MOS Characteristics of Ultra Thin Rapid Thermal CVD ZrO <sub>2</sub> and Zr Silicate Gate Dielectrics", <u>Electron Devices Meeting, 2000. IEDM Technical Digest. International</u> , (2000),27-30	
WL	LEE, C H., et al., "MOS Devices with High Quality Ultra Thin CVD ZrO <sub>2</sub> Gate Dielectrics and Self-Aligned TaN and TaN/Poly-Si Gate electrodes", <u>2001 Symposium on VLSI, Technology Digest of Technical Papers</u> , (2001),137-138	
WL	LEE, et al., "Ultrathin Hafnium Oxide with Low Leakage and excellent Reliability for Alternative Gate Dielectric Application", <u>IEEE Technical Digest of International Electron Devices Meeting 1999</u> , (1999),133-136	
WL	LESKELA, M., et al., "ALD precursor chemistry: Evolution and future challenges", <u>J. Phys. IV France</u> , 9, (1999),837-852	
WL	LUAN, et al., "High Quality Ta <sub>2</sub> O <sub>5</sub> Gate Dielectrics and T[...]", <u>IEEE Technical Digest of Int. Elec. Devices Mtng 1999</u> , (1999),141-142	
WL	LUCOVSKY, G., et al., "Microscopic model for enhanced dielectric constants in low concentration SiO <sub>2</sub> /sub 2/-rich noncrystalline Zr and Hf silicate alloys", <u>Applied Physics Letters</u> , 77(18), (October 2000),2912-2914	
WL	LUO, Z J., et al., "Ultra-thin ZrO <sub>2</sub> (or Silicate) with High Thermal Stability for CMOS Gate Applications", <u>2001 Symposium on VLSI Technology Digest of Technical Papers</u> , (2001),135-136	
WL	MARTIN, et al., "Ion-beam-assisted deposition of thin films", <u>Applied Optics</u> , 22(1), (1983),178-184	
WL	MOLODYK, A A., et al., "Volatile Surfactant-Assisted MOCVD: Application to LaAlO <sub>3</sub> Thin Film Growth", <u>Chemical Vapor Deposition</u> , 6(3), (June 2000),133-138	
WL	MOLSA, HEINI, et al., "Growth of yttrium oxide thin films from beta -diketonate precursor", <u>Advanced Materials for Optics and Electronics</u> , 4(6), (November-December 1994),389-400	
WL	NAKAGAWARA, OSAMU, et al., "Electrical properties of (Zr, Sn)TiO <sub>4</sub> dielectric thin film prepared by pulsed laser deposition", <u>Journal of Applied Physics</u> , 80(1), (July 1996),388-392	
WL	NAKAJIMA, ANRI, et al., "Atomic-layer deposition of ZrO <sub>2</sub> /sub 2/ with a Si nitride barrier layer", <u>Applied Physics Letters</u> , vol.81, no.15, (October 2002),2824-2826	
WL	NAKAJIMA, ANRI, et al., "NH <sub>3</sub> /sub 3/-annealed atomic-layer-deposited silicon nitride as a high-k gate dielectric with high reliability", <u>Applied Physics Letters</u> , 80(7), (February 2002),1252-1254	
WL	NAKAJIMA, ANRI, "Soft breakdown free atomic-layer-deposited silicon-nitride/SiO <sub>2</sub> /sub 2/ stack gate dielectrics", <u>International Electron Devices Meeting. Technical Digest</u> , (2001),6.5.1-4	

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WL	NEUMAYER, D A., et al., "Materials characterization of ZrO/sub 2/-SiO/sub 2/ and HfO/sub 2/-SiO/sub 2/ binary oxides deposited by chemical solution deposition", <u>Journal of Applied Physics</u> , 90(4), (August 15, 2001), 1801-1808	
WL	NIILISK, A , "Atomic-scale optical monitoring of the initial growth of TiO2 thin films", <u>Proceedings of the SPIE - The International Society for Optical Engineering</u> , 4318, (2001), 72-77	
WL	OATES, D E., et al., "Surface impedance measurements of YBa/sub 2/Cu/sub 3/O/sub 7-x/ thin films in stripline resonators", <u>IEEE Transactions on Magnetics</u> , vol.27, no.2, pt.2, (March 1991), 867-871	
WL	OH, C B., et al., "Manufacturable embedded CMOS 6T-SRAM technology with high-k gate dielectric device for system-on-chip applications", <u>Technical Digest of International Electron Devices Meeting 2002</u> , (2002), 423-426	
WL	OSTEN, H J., et al., "High-k Gate Dielectrics with Ultra-low Leakage Current Based on Praseodymium Oxide", <u>Technical Digest of IEDM</u> , (2000), 653-656	
WL	PARK, JAEHOO , et al., "Chemical vapor deposition of HfO/sub 2/ thin films using a novel carbon-free precursor: characterization of the interface with the silicon substrate", <u>Journal of the Electrochemical Society</u> , 149(1), (2002), G89-G94	
WL	PARK, BYUNG-EUN , et al., "Electrical properties of LaAlO3/Si and Sr0.8Bi2.2Ta2O9/LaAlO3/Si structures", <u>Applied Physics Letters</u> , 79(6), (August 2001), 806-808	
WL	PERKINS, CHARLES M., et al., "Electrical and materials properties of ZrO2 gate dielectrics grown by atomic layer chemical vapor deposition", <u>Applied Physics Letters</u> , 78(16), (April 2001), 2357-2359	
WL	POVESHCHENKO, V P., et al., "Investigation of the phas composition of films of zirconium, hafnium and yttrium oxides", <u>Soviet Journal of Optical Technology</u> , 51(5), (1984), 277-279	
WL	QI, W , "MOSCAP and MOSFET characteristics using ZrO2 gate dielectric deposited directly on Si", <u>IEDM - Technical Digest</u> , (1999), 145-148	
WL	QI, WEN-JIE , et al., "Performance of MOSFETs with ultra thin ZrO/sub 2/ and Zr silicate gate dielectrics", <u>2000 Symposium on VLSI Technology. Digest of Technical Papers</u> , (2000), 40-41	
WL	RAHTU, ANTTI , et al., "Atomic Layer Deposition of Zirconium Titanium Oxide from Titanium Isopropoxide and Zirconium Chloride", <u>Chemistry of Materials</u> , 13(5), (May 2001), 1528-1532	
WL	RAMAKRISHNAN, E S., et al., "Dielectric properties of radio frequency magnetron sputter deposited zirconium titanate-based thin films", <u>Journal of the Electrochemical Society</u> , 145(1), (January 1998), 358-362	
WL	RAYNER JR., G , et al., "The structure of plasma-deposited and annealed pseudo-binary ZrO2-SiO2 alloys", <u>Materials Research Society Symposium - Proceedings</u> , 611, (2000), C131-C139	
WL	RITALA, MIKKO , "Atomic Layer Epitaxy Growth of Titanium, Zirconium and Hafnium Dioxide Thin Films", <u>Annales Academiae Scientiarum Fennicae</u> , (1994), 24-25	

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WL	RITALA, MIKKO , et al., "Zirconium dioxide thin films deposited by ALE using zirconium tetrachloride as precursor", <u>Applied Surface Science</u> , 75, (January 1994), 333-340
WL	ROBERTSON, J. , "Band offsets of wide-band-gap oxides and implications for future electronic devices", <u>Journal of Vacuum Science &amp; Technology B (Microelectronics and Nanometer Structures)</u> , 18(3), (May-June 2000), 1785-1791
WL	ROSSNAGEL, S M., et al., "Plasma-enhanced atomic layer deposition of Ta and Ti for Interconnect diffusion barriers", <u>Journal of Vacuum Science &amp; Technology B (Microelectronics and Nanometer Structures)</u> , 18(4), (July 2000), 2016-2020
WL	ROTONDARO, A L., et al., "Advanced CMOS Transistors with a Novel HfSiON Gate Dielectric", <u>Symposium on VLSI Technology Digest of Technical Papers</u> , (2002), 148-149
WL	RYU, CHANGSUP , "Barriers for Copper Interconnections", <u>Solid State Technology</u> , 42(4), (April 1999), 53-56
WL	SAITO, Y , "High-Integrity Silicon Oxide Grown at Low-temperature by Atomic Oxygen Generated in High-Density Krypton Plasma", <u>Extended Abstracts of the 1999 International Conference on Solid State Devices and Materials</u> , (1999), 152-153
WL	SHANWARE, A , et al., "Reliability evaluation of HfSiON gate dielectric film with 12.8 Å SiO <sub>2</sub> equivalent thickness", <u>International Electron Devices Meeting. Technical Digest</u> , (2001), 137-140
WL	SHIN, CHANG H., et al., "Fabrication and Characterization of MFISFET Using Al <sub>2</sub> O <sub>3</sub> Insulating Layer for Non-volatile Memory", <u>12th International Symposium in Integrated Ferroelectrics</u> , (March 2000), 9 pages
WL	SNEH, OFER , et al., "Thin film atomic layer deposition equipment for semiconductor processing", <u>Thin Solid Films</u> , 402(1-2), (Jan. 1, 2002), 248-261
WL	SONG, HYUN-JUNG , et al., "Atomic Layer Deposition of Ta <sub>2</sub> O <sub>5</sub> Films Using Ta(OC <sub>2</sub> H <sub>5</sub> ) <sub>5</sub> and NH <sub>3</sub> ", <u>Ultrathin SiO<sub>2</sub>/sub 2/ and High-K Materials for ULSI Gate Dielectrics. Symposium</u> , (1999), 469-471
WL	SOUCHE, et al., "Visible and infrared ellipsometry study of ion assisted SiO <sub>2</sub> films", (1998), 676-681
WL	SUNTOLA, T. , "Atomic Layer Epitaxy", <u>Handbook of Crystal Growth, 3: Thin Films of Epitaxy, Part B: Growth Mechanics and Dynamics</u> , Amsterdam, (1994), 602-663
WL	TAKEMOTO, J. H., et al., "Microstrip Resonators and Filters Using High-TC Superconducting Thin Films on LaAlO <sub>3</sub> ", <u>IEEE Transaction on Magnetics</u> , 27(2), (March 1991), 2549-2552
WL	TARRE, A , et al., "Comparative study of low-temperature chloride atomic-layer chemical vapor deposition of TiO <sub>2</sub> and SnO <sub>2</sub> ", <u>Applied Surface Science</u> , 175-176, (May 2001), 111-116

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WL	TAVEL, B , et al., "High performance 40 nm nMOSFETs with HfO/sub 2/ gate dielectric and polysilicon damascene gate", <u>Technical Digest of International Electron Devices Meetings 2002</u> , (2002),429-432	
WL	VAN DOVER, R. B., et al., "Amorphous lanthanide-doped TiOx dielectric films", <u>Applied Physics Letters</u> , 74(20), (May 17, 1999),3041-3043	
WL	VAN DOVER, R B., et al., "Deposition of Uniform Zr-Sn-Ti-O Films by On-Axis Reactive Sputtering", <u>IEEE Electron Device Letters</u> , 19(9), (September 1998),329 - 331	
WL	VAN DOVER, R. B., et al., "Discovery of a useful thin-film dielectric using a composition-spread approach", <u>Nature</u> , 392(6672), (March 12, 1998),162-4	
WL	VIIROLA, H , "Controlled growth of antimony-doped tin dioxide thin films by atomic layer epitaxy", <u>Thin Solid Films</u> , 251, (November 1994),127-135	
WL	VISOKAY, M R., "Application of HfSiON as a gate dielectric material", <u>Applied Physics Letters</u> , 80(17), (April 2002),3183-3185	
WL	WILK, G D., et al., "Hafnium and zirconium silicates for advanced gate dielectrics", <u>Journal of Applied Physics</u> , 87(1), (January 2000),484-492	
WL	WILK, G. D., et al., "High-K gate dielectrics: Current status and materials properties considerations", <u>Journal of Applied Physics</u> , 89(10), (May 2001),5243-5275	
WL	WOLF, STANLEY , et al., "Future Trends in Sputter Deposition Processes", <u>In: Silicon Processing of the VLSI Era, Vol. 1</u> , Lattice Press,(1986),374-380	
WL	WOLFRAM, G , et al., "Existence range, structural and dielectric properties of ZrxTiySnzO4 ceramics (x + y =2)", <u>Materials Research Bulletin</u> , 16(11), (November 1981),1455-63	
WL	YAMAGUCHI, TAKESHI , "Band Diagram and Carrier Conduction Mechanism in ZrO2/Zr-silicate/Si MIS Structure Fabricated by Pulsed-laser-ablation Deposition", <u>Electron Devices Meeting, 2000. IEDM Technical Digest. International</u> , (2000),19-22	
WL	YAMAGUCHI, TAKESHI , et al., "Study on Zr-Silicate Interfacial Layer of ZrO2-MIS Structure FABricated by Pulsed Laser Ablation Deposition Method", <u>Solid State Devices and Materials</u> , (2000),228-229	
WL	ZHANG, H. , "Atomic Layer Deposition of High Dielectric Constant Nanolaminates", <u>Journal of The Electrochemical Society</u> , 148(4), (April 2001),F63-F66	
WL	ZHANG, H , et al., "High permittivity thin film nanolaminates", <u>Journal of Applied Physics</u> , 87(4), (February 2000),1921-1924	
WL	ZHU, W , et al., "HfO2 and HfAlO for CMOS: Thermal Stability and Current Transport", <u>IEEE International Electron Device Meeting 2001</u> , (2001),463-466	
WL	ZUCKER, O , et al., "Application of Oxygen Plasma Processing to Silicon Direct Bonding", <u>Sensors and Actuators A</u> , 36, (1993),227-231	

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